
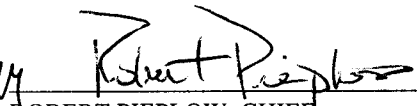
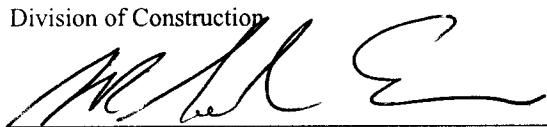


POLICY DIRECTIVE

TR-0011 (REV 6/20/2005)

TRAFFIC OPERATIONS POLICY DIRECTIVE		NUMBER 05-09	PAGE 1 OF 5
KRIS BALAJI, DIVISION CHIEF (Signature) 		DATE ISSUED 09/09/2005	EFFECTIVE DATE 12/01/2005
SUBJECT Crashworthy Temporary Traffic Control Devices in Work Zones Categories 1, 2 & 3 Concur:  ROBERT PIEPLOW, CHIEF Division of Construction  STEVE TAKIGAWA, CHIEF Division of Maintenance		DISTRIBUTION <input checked="" type="checkbox"/> All District Directors <input checked="" type="checkbox"/> All Deputy District Directors - Traffic Operations <input checked="" type="checkbox"/> All Deputy District Directors - Maintenance <input checked="" type="checkbox"/> All Deputy District Directors - Construction <input checked="" type="checkbox"/> All Deputy District Directors - Design <input type="checkbox"/> All Deputy District Directors - Transportation Planning <input checked="" type="checkbox"/> Chief, Division of Engineering Services <input checked="" type="checkbox"/> Chief Counsel, Legal Division <input checked="" type="checkbox"/> Publications (California Supplement Website) http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/index.htm <input checked="" type="checkbox"/> Headquarters Division Chiefs for: Maintenance, Construction, Design & Engineering Services	
DOES THIS DIRECTIVE AFFECT OR SUPERSEDE ANOTHER DOCUMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		IF YES, DESCRIBE This supersedes TOPD #00-05 which covered category 1 & 2 work zone devices.	
WILL THIS DIRECTIVE BE INCORPORATED IN THE MUTCD 2003 CALIFORNIA SUPPLEMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		IF YES, DESCRIBE Part 6 Temporary Traffic Control, Chapter 6F, Section 6F.01 <u>Types of Devices</u>	

DIRECTIVE**Standard:**

In accordance with three Federal Highway Administration (FHWA) memoranda, one dated July 25, 1997 and, two dated August 28, 1998, work zone temporary traffic control devices shall be crashworthy as defined by National Cooperative Highway Research Program (NCHRP) Report 350, dated 1993.

Support:

Temporary traffic control devices are divided into four categories, with each having its own level of testing requirements and compliance dates. FHWA requires all state and local agencies to meet NCHRP Report 350 criteria for work zone traffic control devices used on the National Highway System (NHS) routes within their jurisdictional boundaries. This directive supersedes Traffic Operations Policy Directive (TOPD) # 00-05, issued November 21, 2000, which established the California Department of Transportation (Department) policy for Category 1 & 2 traffic control devices. This directive expands the Department's policy to include Category 3 temporary traffic control devices.*

Standard:

The Department shall implement NCHRP 350 criteria for crashworthy temporary traffic control devices in work zones on all state highways. Crashworthiness of temporary traffic control devices shall be substantiated. When no longer needed, temporary traffic control devices shall be removed from the work zone.

* Category 4 temporary traffic control devices are not covered by this policy directive. These will be addressed when FHWA develops crash test requirements for Category 4.

IMPLEMENTATION

Crashworthiness of temporary traffic control devices shall be substantiated as follows:

Standard:

Category 1 devices purchased after October 1, 1998 shall be employed based on the vendor's self-certification. Self-certification shall be based on crash testing, crash testing of similar devices, or years of demonstrable safe performance.

Category 2 devices shall be on FHWA's list of Acceptable Crashworthy Category 2 Hardware for Work Zones which meet NCHRP Report 350 criteria for crashworthiness. Category 2 devices that have not received FHWA acceptance and were purchased before October 1, 2000, shall not be used. Category 2 devices in use that have received FHWA acceptance shall be labeled with the FHWA acceptance letter number and the name of the manufacturer by the start of the project. The label shall be readable and permanently affixed by the manufacturer. Category 2 devices without a label shall not be used in highway work zones.

Category 3 devices shall be crash tested in accordance with NCHRP Report 350 criteria. The Department shall include Standard Special Provision (SSP) 12-000, Standard Plans and construction details in all contract documents.

Support:

For Category 3, the compliance date was October 1, 1998 for truck mounted attenuators and work zone crash cushions. The compliance date for other Category 3 devices was October 1, 2002.

Option:

Type III barricades may be used as sign supports if the barricades have been successfully crash tested as one unit with a construction area sign attached.

DELEGATION**Standard:**

This Traffic Operations Policy Directive update is published with a Standard Special Provision (SSP) update for SSP 12-000 that will be included in all contract construction and maintenance rehabilitation projects to include Temporary Traffic Control Device Categories 1, 2 & 3 as specified by the FHWA. Authority to implement this policy is delegated to each District Director and the respective Deputy District Directors over the Design, Construction, Maintenance and Traffic Operations activities within each District (or Region). This policy shall be added to the Manual on Uniform Traffic Control Devices 2003 California Supplement, Part 6, Temporary Traffic Control, to specify Department policy and implementation.

District (or Region) Traffic Design Engineers who prepare Plans, Specifications and Estimates shall include the updated SSP 12-000 in all projects wherein temporary traffic control devices and other traffic handling equipment are used.

Specific delegation to implement this directive by Division of Construction to District (or Region) Resident Engineers shall follow in a separate Division of Construction Policy Bulletin.

District Maintenance Engineers and Superintendents whose responsibility it is to administer maintenance projects with Department staff, or who perform routine roadway maintenance under contract shall observe the provisions and requirements contained in this policy directive.

District Traffic Operations staff who deploy temporary traffic control devices in the performance of their duties shall observe the provisions and requirements contained in this policy directive.

BACKGROUND

Support:

"Work Zone" and categories of temporary traffic control devices are defined as follows:

A work zone is an area of a highway with construction, maintenance, or utility work activities. A work zone is marked by signs, channelizing devices, barriers, pavement markings, and/or work vehicles. It extends from the first warning sign or rotating, flashing, oscillating or strobe lights on a vehicle to the END ROAD WORK sign or the last temporary traffic control device.

Category 1 temporary traffic control devices are small and lightweight (less than 45 kg) devices which have been in common use for many years. These devices are known to be crashworthy by crash testing, crash testing of similar devices, or years of demonstrable safe performance. Category 1 traffic control devices include traffic cones, plastic drums, portable delineators, and channelizers. The Category 1 self-certification form can be obtained at the following intranet address:

<http://cefs.dot.ca.gov/>. Click on "Forms" from the menu on the left side of the screen and type in form number "tr0030" to get a copy of the "Certificate of Crashworthiness" for Category 1 temporary traffic control devices (a copy of the blank form is attached for reference).

Category 2 temporary traffic control devices are small and lightweight (less than 45 kg) devices that are not expected to produce significant vehicular velocity change, but could cause potentially harmful reactions to impacting vehicles. Category 2 temporary traffic control devices include barricades and portable sign supports. Individual crash testing is required for Category 2 temporary traffic control devices. Category 2 devices are listed on the "Acceptable Crashworthy Category 2 Hardware for Work Zones" list maintained by FHWA and available at the following internet address:

<http://safety.fhwa.dot.gov/fourthlevel/hardware/listing.cfm?code=workzone> and on the Department's internet address:
<http://www.dot.ca.gov/hq/traffops/signtech/signdel/pdf/Category2.pdf>

Category 3 temporary traffic control devices consist of traffic-handling equipment and devices which weigh 45 kg or more and are expected to cause significant velocity changes to impacting vehicles. Temporary traffic-handling equipment and devices include stationary mounted and portable sign supports, crash cushions, truck mounted attenuators, temporary railing, temporary barrier, and end treatments for temporary railing and barrier. Category 3 temporary traffic control devices are shown in the Standard Plans, on project plans or listed on the Department's Highway Safety Features list at the following Internet address:
http://www.dot.ca.gov/hq/esc/approved_products_list/HighwaySafe.htm

Category 4 temporary traffic control devices may be required to be crashworthy in the future to include traffic-handling equipment and devices, such as portable or trailer-mounted arrow displays, temporary traffic signals, area lighting supports, and portable changeable message signs. FHWA's determination of crash test requirement for Category 4 devices is anticipated to happen after October 1, 2006. FHWA continues to monitor the in-service crash performance of these devices and encourage the design and testing of crashworthy versions.

DEFINITIONS

When used in this Traffic Operations Policy Directive, the text shall be defined as follows:

- 1) **Standard** - a statement of required, mandatory, or specifically prohibited practice. All standards text appears in **bold** type. The verb **shall** is typically used. Standards are sometimes modified by Options.
- 2) Guidance - a statement of recommended, but not mandatory, practice in typical situations, with deviations allowed if engineering judgement or engineering study indicates the deviation to be appropriate. All Guidance statements text appears in underlined type. The verb should is typically used. Guidance statements are sometimes modified by Options.
- 3) Option - a statement of practice that is a permissive condition and carries no requirement or recommendation. Options may contain allowable modifications to a Standard or Guidance. All Option statements text appears in normal type. The verb may is typically used.
- 4) Support - an informational statement that does not convey any degree of mandate, recommendation, authorization, prohibition, or enforceable condition. Support statements text appears in normal type. The verbs shall, should and may are not used in Support statements.

ATTACHMENTS

WORK ZONE CATEGORY 1 TEMPORARY TRAFFIC CONTROL DEVICE CERTIFICATE OF CRASHWORTHINESS

TR-0030 (REV 4/2004)

PAGE _____ OF _____

DATE			(This certificate shall not be reproduced except in full.)		FED-AID #
					CONTRACT #
					DIST/CO/RTE/KP(PM)
NAME OF CERTIFYING VENDOR			NAME OF CERTIFYING PERSON (Print)		
MAILING ADDRESS			NAME OF CERTIFYING PERSON (Signature)		
CITY	STATE	ZIP CODE	TITLE OF CERTIFYING PERSON (Print)		
			PHONE NUMBER		

Check all that apply:

MANUFACTURER(S)

MODEL NUMBER(S)

☐ CONES


☐ DRUMS, Warning Light (Optional)


☐ PORTABLE DELINEATORS


☐ CHANNELIZERS


Category 1 temporary traffic control devices are defined as those items that are small and lightweight (less than 45 kg) that have been in common use for many years and are known to be crashworthy by crash testing, crash testing of similar devices or years of demonstrable safe performance.

A vendor is defined as any person or organization (commercial or governmental) that designs, manufactures, sells, or deploys highway safety hardware or temporary traffic control devices.

ADA Notice

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